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**ANALYSIS OF THE DRIVERS OF FINANCIAL PERFORMANCE OF
DEVELOPMENT FINANCIAL INSTITUTIONS IN KENYA**

RUTH MOSE KATSENGA

REG. No: MDF/112758/18

**A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE FOR THE AWARD
OF DEGREE OF MASTER OF SCIENCE IN DEVELOPMENT FINANCE OF
STRATHMORE UNIVERSITY**

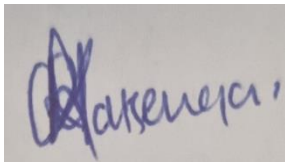


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DECLARATION

I declare that this thesis is my original work and has not been presented to any other university for the award of a degree. Any work done by other people has been duly acknowledged. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person.

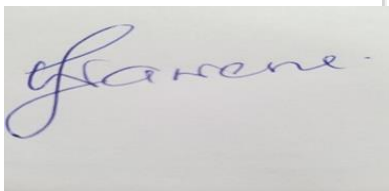
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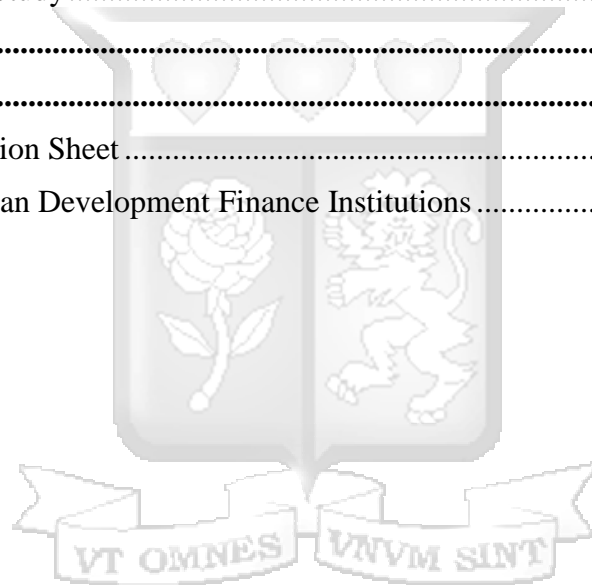


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ABBREVIATIONS AND ACRONYMS

CAMEL – Capital adequacy, Asset quality, Management Efficiency, Earnings and Liquidity

DFI – Development Finance Institution

TFC–Tourism Finance Corporation

AFC–Agricultural Finance Corporation

ICDC–Industrial Commercial and Development Corporation

IDB - Industrial Development Bank

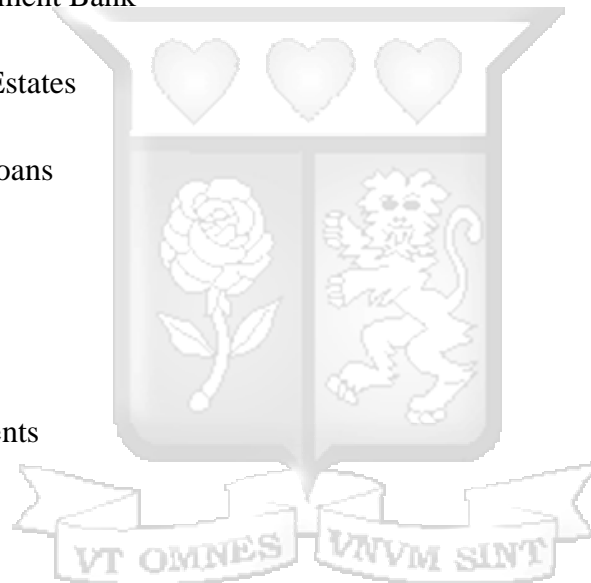
KIE- Kenya Industrial Estates

NPL – Non-performing loans

ROA- Return on Assets

ROE- Return on Equity

ROI- Return on Investments



OPERATIONAL DEFINITION OF KEY TERMS

Asset Quality: A measure on the combination of non-performing loans, disbursed loans as well as provision for losses.

Development Finance Institutions: These are specialized financial institutions or organizations that provide long-term capital, technical assistance, and other forms of support to promote economic development and sustainable growth in Kenya.

Financial Performance: A measure on the use of assets and equity by an organization to generate revenues.

Interest rates: A key monetary policy used by Central banks around the world to achieve macroeconomic stability in the economy. They represent the economic cost of lending money within commercial banks

Liquidity Management: The extent to which organizations cater for their financial obligations as they come due in the short run

Management Efficiency The capability of the management to deploy its resources efficiently, income maximization, reducing operating costs can be measured by financial ratios. One of these ratios used to measure management efficiency is operating profit to income ratio

Return on Assets: An accounting ratio that shows the average return on total assets employed.

Return on Equity: An accounting ratio that shows the average return on total investments of the shareholders in investments of the shareholders in the form of equity

ABSTRACT

The Development Financial Institutions are a critical nerve Centre to the economic growth of any country. The financial performance of Development Finance Institutions in Kenya over the last twenty years has not been performing according to the stakeholder expectations. DFI's in Kenya had failed to provide a sustainable long-term finance to the industrial sector and the agricultural sector. This was evidenced by credit being allocated on the basis of political and social concerns, lack of effective and efficient incentives to collect. Studies on these development institutions have remained scanty with those that have attempted having varying outcomes thus making it difficult to provide a guide to policy formulation in Kenya. The purpose of the study was to analyse the drivers of financial performance of Development Financial Institutions (DFIs) in Kenya. The driver of financial performance considered in the investigation included asset quality, management efficiency and liquidity management in Kenya. The survey made use of census approach to arrive at five Development Finance Institutions employed in the investigation. Relying on information of the financial audited reports of these institutions, the data was retrieve spanning over the period 2012/2013 to 2019/2020. Laying the theoretical foundation for the study was the theoretical postulations of the CAMEL model and the Liquidity Preference Theory. The outcomes of the investigations were reached owing to the credit accorded to the descriptive and regression techniques with the outcomes presented in tables. The outcome uncovered that asset quality is a significant and negative driver of Development Finance Institutions' financial performance; management efficiency was unfolded as a positively and significant driver of Kenyan Development Finance Institutions financial performance; while liquidity management was reported to be a significantly positive driver of Development Finance Institutions financial performance in Kenya. Relating to the outcomes, the investigation recommended that the management of Development Financial Institutions should strengthen the means through which non-performing loans could reduce to boost the financial performance of the institutions. This can be done through critical assessment of customers' credit worthiness to reduce the amount of loans that are non-performing in Kenya.



CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Development finance institutions (DFIs) have acted as the major mechanism by which governments and donors implement economic development strategies. DFIs function as a means of directing funds towards priority sectors, frequently with preferential terms, aiming to achieve social and economic objectives not fully addressed by market forces alone. Their core mandate is to invest in domains where gaps or inefficiencies in the market and institutions leave needs unmet, lessening reliance on other financial players (Chin & Gallagher, 2019; Babones et al., 2020; Squires et al., 2016; Humphrey & Michaelowa, 2019). By directing capital towards underserved areas and populations, DFIs play an important countercyclical and developmental equalizing role that supplements—but does not substitute—the private financial system. Their interventions are intended to have demonstrative effects that stimulate broader investment and growth over the long term.

DFIs invest in private sector companies and funds with the expectation of earning a financial return, as profitability allows DFIs to self-sustain and expand their development work. Likewise, DFI shareholders anticipate contributions toward socioeconomic goals like the UN SDGs. Ideally, DFIs direct capital toward ventures with highest development upside, dependent on viable private opportunities and DFI resource availability (Attridge et al., 2019).

DFIs thus pursue a double bottom line of profitability and promoting host nation progress. They must generate earnings through prudent investing while enabling economic advancement. Balancing social and financial returns can be challenging, especially with limitations measuring social impacts. DFIs aim to balance these dual directives in optimizing developmental effects within constraints of commercial viability. Their dual mandate necessitates strategic compromises in balancing sometimes-competing objectives to best maximize long-term development impact through sustainable private sector engagement and self-financing.

Development Finance Institutions (DFIs) play a crucial role in fostering economic growth and development globally. Owned and controlled by governments, DFIs possess unique attributes such as investment opportunities identification, risks assessment, and provide the necessary financial and technical support that enable them to serve as catalysts for economic progress (Chin & Gallagher, 2019). These unique attributes as argued by Mishra (2023), collectively enable DFIs to bridge the financing gap, mobilize resources, and contribute to sustainable development in developing countries. Their ability to provide risk mitigation allows the private sector to engage in projects that they might otherwise abandon (Mutunga, 2018).

DFIs specialize in offering long-term loans and have the capacity to restructure loans to facilitate easier repayments in case of defaults (Adesoye, Bolaji, Atanda, & Maliq, 2018). They are often endowed with ample capital by governments, thereby affording them the privilege of accessing funds designated for technical assistance. Consequently, there is an expectation that they will pass on subsidies to beneficiaries in various forms, including extended repayment periods and below-prime interest rates (Nthiga, 2017).

Over the past decade, DFIs have gained prominence, providing financial support to both the public and private sectors (Bortes, Sinha & Grettve, 2011; Clark, Reed, & Sunderland, 2018). Private sector support from DFIs has increased substantially, reaching \$33 billion in 2019, representing more than a doubling in annual commitments over six years (World Bank, 2020). In 2020, DFI support amounted to a quarter of official development assistance (ODA), though it is not typically counted as ODA. On average, DFIs contribute between 2% and 12% of total domestic investment for the period for which data are available (World Bank, 2021).

Globally, the asset quality management is a concern because DFI credit does not only affect the stability of the DFIs themselves but also on economic stability (Sanyal, Pinchot, Prins, & Visco, 2016). The significant role of DFIs in developing countries has been a phenomenon that continues to be discussed on their role in economic development of a nation by both policy makers and academicians (Chin & Gallagher, 2019; Attridge, et al., 2019; Shaikh, Ismail, & Shafiai, 2017; Squires, et al., 2016). This continued debates on the role of DFIs is attributed to the critical role played in poverty reduction, job creation and infrastructural developemnt of developing countries. Aligning the aforementioned view, Chin and Gallagher (2019) observed that the DFIs

are sources of capital at a lower cost and helps reduce the dependence on other financial institutions. This reduces the risk borne by the private sector in the event of a financial crisis (Mutunga, 2018).

In the African context, the lending activities of DFIs are confronted with risks that are primarily influenced by the quality of assets (Babones, Åberg, & Hodzi, 2020). This implies that the potential for financial losses or non-performing loans is closely tied to the performance and value of the assets financed by DFIs in the region. In East Africa, the problem of DFIs asset quality has put serious adverse effects on the economy; for example, the Kenyan government has implemented various policy measures for management of asset quality and securing confidence in the DFIs financial system. These measures include prudential regulations, credit risk assessment, loan recovery mechanism, regulatory supervision, risk management framework and corporate governance standards (Kipchoge, 2022). In recent times, non-performing loans (NPLs) effect on asset quality has been trending and becoming a cause of concern for Development Financial Institutions (DFIs) stability in the face of reeling economic downturn (Adesoye, Bolaji, Atanda, & maliq, 2018). The effect of default of due debts on DFIs profitability can be identified with a possible DFIs failure, barrier to further lending, reduction in profit level and negative economic growth in the society.

Kenya has outlined its long-term development goals in Vision 2030, which aims to transform the country into a middle-income industrialized economy providing high living standards by 2030. Regarding the financial sector, the vision is to develop a vibrant and globally competitive industry that promotes high savings levels and finances Kenya's investment needs. Achieving this requires coordinated efforts from all financial players, including key contributors like Development Finance Institutions (DFIs). DFIs are important members of the financial sector that provide long-term financing and development funding to small and medium enterprises (SMEs) (Lukilah & Wekesa, 2021). They also help develop the sector by providing access to long-term credits. Initiatives enhancing credit information sharing will further deepen and mature the industry, according to (Marbuah et al. 2022). In summary, DFIs are identified as important cogs in realizing Kenya's Vision 2030 goals for a robust financial system through facilitating investment and business growth.

DFIs were established in Kenya to facilitate long term financing for prioritized industries supporting industrialization (Nthiga, 2017). Unlike commercial banks which require full collateral, DFIs progressively enhance security as projects progress and offer additional benefits such as appraisals, monitoring, advisory services (Namusonge, 2004). Despite existing since the 1960s/70s, poor asset quality management has led most DFIs collapsing and a development financing gap remains, raising concern about private sector expansion without suitable long term investment funds (Namusonge, 2004; Githua, 2015). Specifically, Githua (2015) identified asset quality as a core constraint causing DFIs to significantly underachieve in catalyzing development roles. While intended to plug financing gaps, weaknesses in managing loan portfolios seriously impeded DFI effectiveness over decades (Nthiga, 2017; Namusonge, 2004; Githua, 2015). This highlights asset quality as a persistent problem limiting their developmental impact, underscoring need for the current research

Strong and stable DFIs are important for a country's economic progress, as the performance and development of DFIs are closely interconnected with a nation's advancement. DFIs play an invaluable role in financial services by channeling funds into productive sectors, intermediating the flow of capital from surplus to deficit units, and supporting government's financial and economic policies, thus supporting developmental plans. The stability of DFIs in developing economies is notably significant, as any distress affects such plans and thereby economic progress. DFI stability is thus a prerequisite for sustainable economic growth and resilience against financial crises. Similar to other businesses, DFI success is evaluated based on their financial performance/profitability and asset quality, which are crucial to long-term viability. Given the pivotal role of DFIs, ensuring high-quality assets and strong profitability as measures of institutional soundness is essential for continued effective developmental contribution in Kenya. (Ombaba, 2013).

Financial performance and profitability are key benchmarks for success in DFIs as with any business (Adesoye et al., 2018). However, rising non-performing loans (NPLs) directly impact DFI profitability by diluting returns on assets (ROA), a key performance metric (Mutunga, 2018; Chimkono et al., 2016). NPLs negatively affect ROA (Mutunga, 2018) and can lead DFIs incurring heavy disposal costs eroding profits (Araka et al., 2018). NPLs also represent opportunity costs as the non-interest generating assets could be invested elsewhere to generate earnings (Adesoye et

al., 2018). Additionally, DFIs must provision for losses on bad assets, affecting profitability (Babones et al., 2020). There are also costs associated with NPL recovery efforts (Babones et al., 2020). Therefore, higher NPL ratios pose risks to DFI profitability through ROA dilution and increased expenses related to provisions, recoveries and disposals. Maintaining sound asset quality is important for protecting and enhancing developmental financial institution performance and viability.

Asset quality refers to the level of classified or problematic assets compared to total loans provided (Nyarko-Baasi, 2018). For DFIs, asset quality relates to loan quality, measured by non-performing loans (NPLs) consisting of past due and restructured loans. Assessing asset quality can reflect a DFI's ability to manage productive assets profitably (Githua, 2015). DFI funds are intended to generate expected income levels through placement in assets.

Similar to other financial institutions, the major risk for DFIs is non-performing assets (NPAs), which are bad loans where borrowers fail to meet repayment obligations. Nthiga (2017) stressed NPAs in loan portfolios undermine operational efficiency, ultimately impacting profitability, liquidity and solvency.

While important for all organizations, asset quality is significantly impactful on DFI profitability given their role in financial markets, national economies and development processes. Poor asset maintenance can disrupt proper DFI operations and the wider financial system (Wamalwa, 2016). Therefore, ensuring strong asset quality is vital for sustained financial and developmental contributions by these institutions.

1.1.1 Drivers of Financial Performance

Drivers of financial performance can be defined as the key factors or variables that significantly influence and shape the financial outcomes and success of a company (Kimani, 2023). These drivers as asserted by Trianni, et al (2017) can vary across industries and contexts, but they generally encompass various aspects of a firm's operations, strategies, and external environment. The key drivers of financial performance include factors that have a significant impact on the activity of another entity, such as macro and microeconomic drivers, and business drivers that impact the operational and financial results of a business (Issah & Antwi, 2017). These drivers can be

quantifiable measurements used to determine, track, and project the economic well-being of a business, and they vary significantly by industry (Korhonen *et al.*, 2023).

Asset quality refers to the risks associated with assets held, like loans, securities, property, and off-balance sheet items (Arisa, 2018). It assesses credit risk prediction accuracy and management effectiveness.

Asset quality determines an institution's condition based on underwriting standards, credit practices, and risk identification (Jebessa, 2020; Gebremeskel, 2021; Belete, 2021). It strongly influences performance by impacting interest income and bad debt costs. Higher non-performing asset ratios to gross/net assets indicate lower quality, and vice versa (Lamers *et al.*, 2019).

Financial performance measures how efficiently a firm generates revenues from core operations over time, also indicating overall health (Awaysheh *et al.*, 2020). It can be compared within/across industries and sectors. Performance improves by actions like optimizing cash flow, divesting unneeded assets, revising budgets, cutting expenses, refinancing debt, and analyzing statements and indicators (Nzoka, 2015).

Non-performing loans negatively associate with profitability (Babones *et al.*, 2020). For this study, asset quality of DFIs is assessed using the non-performing loans to loan loss provision ratio to capture credit risk impacts on financial returns. Effectively gauging asset maintenance is important for institutional soundness and sustainability.

Management efficiency greatly influences firm financial performance by optimizing operations, reducing information asymmetry, and facilitating good decisions (Ting *et al.*, 2021). As a complex yet pivotal profitability factor, it is challenging to capture management efficiency solely through subjective evaluation. Instead, ratios can offer objective measurement, like total asset growth, loan growth rate, earnings growth rate, and operational efficiency in managing operating expenses (Ongore & Kusa, 2013).

Specifically, the operating expenses to total assets ratio indicates management quality by reflecting cost control abilities (Athanasoglou *et al.*, 2005). Higher efficiency lowers expenses, boosting profitability, implying an inverse relationship between the operating expense ratio and profits

(Bourke, 1989). Additionally, management efficiency is a key financial performance determinant, measured via ratios such as operating expenses to total assets. Efficient management links to greater profitability (Guru et al., 2002). For this study, the operating profit to total income ratio served as the management efficiency metric to objectively gauge the impact of managerial competencies on developmental financial institution performance.

Liquidity management involves ensuring a company has sufficient cash flow to meet near-term obligations through effective working capital strategies (Effiong & Ejabu, 2020). It refers to the ability to fulfill financial obligations promptly by keeping optimal capital availability (Kimathi, 2014). Sound liquidity management relies on timely financial data and is critical for performance since it impacts working capital (Chuan-guo et al., 2014).

As companies mature, liquidity management evolves from basic cash needs to maximizing yield across supply chains using full visibility (Coupa, 2023). Different types of liquidity include asset, market and accounting liquidity (Islam et al., 2017; Díaz & Escribano, 2020). Practices encompass monitoring receivables/payables, optimizing them, and using ratios for assessment (Musiita et al., 2023). Prior studies examined liquidity via ratios such as current and quick ratios (Khokhar, 2015; Bolek, 2013), which consider current assets/liabilities in gauging ability to meet near-term obligations (Musiita et al., 2023). Consistent with these liquidity management discussions, the current ratio of current assets to current liabilities was adopted as the measure in this study.

1.1.2 Financial Performance

Financial performance reflects the extent to which a company achieves its financial objectives over time (Ichsan et al., 2021). It is typically evaluated using financial ratios from statements, like liquidity, profitability, activity and debt ratios (Devi et al., 2020). Operational performance, income sources, and shareholder returns factor into assessments as well (Ichsan et al., 2021). Margin growth rates and accounting analysis also provide insights (Silaban, 2017).

Common financial performance indicators include ROA, NIM and ROE, which measure asset and equity-based profitability (Silaban, 2017). Loan concentrations also impact institutional results, with quality management linked to better performance (Chege et al., 2019).

DFI performance indicates profit sustainability abilities to withstand losses while strengthening capital positions (Chege et al., 2019). Persistent losses deplete equity risking investor positions. For shareholder value creation, ROE must surpass equity costs.

ROE divides net income by equity, reflecting returns on shareholder investments. Higher ROE signals more internal profit generation abilities (Araka et al., 2018). ROA divides income by assets, gauging asset-based profit efficiencies (Babones et al., 2020; Chin & Gallagher, 2019). Higher ROA demonstrates more effective resource utilization (Wen, 2010).

This study uses ROA and ROE as core DFI financial performance metrics in Kenya. They encompass various dimensions of institutional soundness critical for ongoing contributions to development goals according to San and Heng (2011).

1.1.3 Development Finance Institutions in Kenya

Development Finance Institutions (DFIs) in Kenya were established to provide long-term financing to support industrialization by targeting priority economic sectors. At that time, Kenya's financial system was unable to adequately meet the needs of African farmers/business owners or supply enough long-term capital for economic development, primarily due to inherent structural deficiencies within the system (Mpofu & Sibindi, 2022; Crouzet & Eberly, 2019). As the conventional banking sector was ill-equipped to facilitate long-term lending and meet the needs of various stakeholders, the government saw a need to establish specialized development banks in the form of DFIs to fill gaps in financing and promote growth objectives. The lack of appropriate financing mechanisms constrained broader economic progress, contributing to the decision to set up DFIs as a strategic solution.

In response, the Kenyan government deliberately established various DFIs with the mandate of channeling long-term financing to the private sector. The first such DFI was the Industrial and Commercial Development Corporation (ICDC), founded in 1954, reflecting the strategic importance placed on these institutions to fill financing gaps hampering development at the time. Their establishment aimed to support industrialization by facilitating access to long-term capital

unavailable from traditional banks, demonstrating the developmental roles DFIs were designed to fulfill in Kenya's evolving economy and financial architecture.

Following Kenya's independence, several specialized DFIs were established to support specific sectors. These included the Agricultural Finance Corporation (AFC) in 1963, the Industrial Development Bank (IDB) in 1963 (later transformed into the Industrial and Commercial Development Bank, ICDB), and the Kenya Industrial Estates (KIE) in 1967 (Mutunga, 2018). These institutions aimed to provide financial services and support to agriculture, industry, and small and medium-sized enterprises (SMEs). The consolidation and restructuring of the DFIs in the 1980s and 1990s resulting from changing economic conditions saw the government undertake a series of measures to consolidate and restructure DFIs (Chege, Omagwa, & Abdul, 2019). This included the merger of ICDC, ICDB, and AFC into the Industrial and Commercial Development Corporation (ICDC) in 1986. The ICDC was later transformed into the Industrial and Commercial Development Corporation (ICDC) in 1993, which became a holding company for various subsidiaries operating in diverse sectors (Sanyal *et al.*, 2016).

Alongside the consolidation efforts, specialized DFIs were established to cater to specific sectors. For example, the Agricultural Finance Corporation (AFC) continued to provide financial services to the agricultural sector, while the Export Promotion Council (EPC) focused on supporting export-oriented industries (Nganga & Mugo, 2018). The Micro and Small Enterprises Authority (MSEA) was also established to provide financial and non-financial support to micro and small enterprises. With this, the government introduced new DFIs and reforms in the 2000s and beyond. In recent years, Kenya has witnessed the establishment of new DFIs and the introduction of reforms to enhance their effectiveness. For example, the Kenya Mortgage Refinance Company (KMRC) was established in 2018 to provide long-term funding for affordable housing. Additionally, the government launched the Kenya Development Bank (KDB) in 2020, with a mandate to provide long-term financing for development projects across various sectors making a total of five DFIs in Kenya which include Tourism Finance Corporation, Industrial Commercial and Development Corporation, IDB capital, Kenya Industrial Estates and Agricultural Finance Corporation with such institutions located in Nairobi (Humphrey & Michaelowa, 2019). While Development Finance Institutions (DFIs) have existed in Kenya since the 1960s and undergone reforms, there continues to be a sizable gap in development financing, raising concerns about how

the private sector can sufficiently expand and grow without appropriate long-term investment funding (Mullei & Ng, 1990; Chironga et al., 2021). Even after decades of establishing and reforming specialized developmental lending institutions, a notable shortage of financing for productive investment persists. This ongoing financing insufficiency poses challenges for meaningful private sector advancement, highlighting the importance of DFIs optimizing their operations and outreach to more fully meet ongoing needs and fulfill their developmental mandates of stimulating broader economic activity and progress through sustainable private sector engagement over the long-run.

DFI investments in Kenya show a clear focus on the finance sector, which receives the lion's share of funding at 57% (Marbuah *et al.*, 2022). Energy ranks as the second most supported sector, receiving 13% of the funds with an example of collaboration between CDC and Globeleq resulted in a noteworthy investment of US\$ 66 million, with CDC contributing US\$ 50 million and Globeleq investing US\$ 16 million for the establishment of a solar plant in Malindi, Kenya in 2018 (Marbuah *et al.*, 2022). Other sectors such as industry, tourism, manufacturing, and transport each receive a moderate share of roughly 4% to 5% of DFI investments. Agriculture, though vital, represents a relatively smaller portion, accounting for approximately 2% of the DFI flows. It's worth noting that even when excluding generic funds, which make up only 3.9% of total DFI funds in Kenya, with the overall investment landscape remains largely unchanged (Kiremu, 2020).

1.2 Statement of the Problem

Over many years, international donors have concentrated on establishing and reinforcing development finance institutions (DFIs). However, numerous such institutions have faced issues including borrower delinquencies on loan repayments, high administrative expenses, financial insolvency, and reliance on subsidies for ongoing viability. While DFIs were established with the aim of catalyzing private sector investment in development priorities, in practice some have struggled with operational challenges that undermine self-sufficiency and sustainability objectives. Persistent difficulties with asset quality, efficiency, and profitability have prevented certain DFIs from fulfilling their developmental mandates and realizing their full potential without ongoing donor dependence, bringing into question whether they have optimized mechanisms for generating commercial returns and development impact simultaneously in the long run.

Over the past two decades, the financial performance of Development Finance Institutions (DFIs) in Kenya has failed to meet stakeholder expectations, as reported by the World Bank in 2019. Notably, Kenyan DFIs have witnessed a concerning upward trend in non-performing loans (NPLs). For instance, non-performing loans increased by 32.4 percent, from Ksh. 11 billion in December 2018 to Ksh. 17 billion in December 2019. Furthermore, the ratio of gross non-performing loans to gross loans inched up from 3.9 percent in December 2019 to 7.9 percent in December 2020, according to the Central Bank of Kenya (CBK, 2021).

These developments have raised questions about the credit policies and overall performance of Kenyan DFIs, drawing criticisms from various quarters (Klagge, 2020). The International Monetary Fund (IMF) highlighted concerns about DFIs in Kenya failing to provide sustainable long-term finance to the industrial and agricultural sectors, with credit allocation being influenced by political and social considerations (IMF, 2018). Additional issues include inadequate incentives for effective loan collection, pressure to forgive loans, high default rates, elevated credit costs, and the absence of efficient appraisal systems (Mutunga F. K., 2018). These challenges persist despite various financial reforms aimed at enhancing DFI performance in Kenya (Sporta, 2018).

In light of these concerns, it becomes imperative to investigate whether asset quality, management efficiency, and liquidity management represent the missing factors that hinder the financial performance of DFIs in Kenya. If these factors are indeed contributing to the issue, it is crucial to understand the extent to which they affect the financial performance of DFIs in Kenya.

Several studies have analyzed factors influencing financial performance. Gabriel et al. (2019) found non-performing loans negatively impact Nigerian bank profitability but focused only on NPLs, cash reserves and inflation, lacking contextually and conceptually.

Kimani (2023) established underwriting risk and solvency determine Kenyan insurance company performance but addressed insurance rather than DFI context. Kim et al. (2022) revealed smart manufacturing's positive impact on business performance using meta-analysis, differing methodologically from this study's descriptive and regression approach specific to DFIs in Kenya.

Akims (2021) investigated liquidity regulation impact on Kenyan microfinance bank profitability but isolated management efficiency's influence, conducted in Kenya but concerning microfinance not DFI context.

Theoretically, prior studies did not account for liquidity preference theory and CAMEL model included in this study framework to better analyze Kenya DFI profitability drivers.

While informing generally, prior research exhibited gaps conceptually, contextually, methodologically and theoretically that this study aimed to address through its Kenyan DFI-focused analysis empirically testing performance determinants.

1.3 Objectives of the Study

1.3.1 General Objective

The purpose of the study was to analyse the drivers of financial performance of Development Financial Institutions in Kenya

1.3.2 Specific Objectives of the Study

The specific objectives of the study were to:

- i. To examine the effect of asset quality on financial performance of Development Finance Institutions in Kenya
- ii. To analyze the effect of management efficiency on financial performance of Development Finance Institutions in Kenya
- iii. To analyze the effect of liquidity management on financial performance of Development Finance Institutions in Kenya

1.4 Research Questions

The research questions which guided the study included the following:

- i. What effect does asset quality have on the financial performance of Development Finance Institutions in Kenya?
- ii. What effect does management efficiency have on the financial performance of Development Finance Institutions in Kenya?
- iii. What effect does liquidity management have on the financial performance of Development Finance Institutions in Kenya?

1.5 Significance of the Study

This study on determining the key drivers of financial performance among Development Finance Institutions (DFIs) in Kenya holds considerable importance. DFIs serve a vital function in furthering economic progress through channeling financial means to various sectors in need of support. Nevertheless, a more robust comprehension of the aspects shaping their financial returns is still needed. Research investigating the determinants impacting Kenyan DFI profitability would add value to current understanding by unveiling the particular elements influencing institutional returns within this setting. Such insights would help address existing knowledge gaps and enhance appreciation for the contextual nuances surrounding DFI operations locally. Given their developmental mandates, optimized performance proves critical to sustaining self-financing abilities and development impact over the long-term. This investigation thereby presents meaningful potential to furnish more granular perspective guiding improved strategic leadership, policy design, and overall viability assessment of these specialized institutions.

The study carefully selected eight DFIs as representative sample in Kenya. The sample adequately captured the diversity of DFIs in terms of size, scope, and operational characteristics. A census sampling strategy ensures that the findings would be generalized to the broader population of DFIs in Kenya, increasing the study's methodological rigor. Robust statistical techniques help identify significant drivers, establish causal relationships, and control for potential confounding variables, enhancing the study's methodological soundness.

The findings of the study would provide valuable insights to DFI managers and policymakers in Kenya regarding the factors that drive financial performance. Understanding these drivers would help inform strategic decision-making processes, such as resource allocation, investment strategies, risk management practices, and operational improvements. The study would guide DFI leaders in identifying areas where they need to focus their efforts to enhance financial performance and sustainability in Kenya.

1.6 Scope of the Study

This study aims to analyze the key drivers of financial performance among Development Finance Institutions (DFIs) in Kenya by examining the effects of asset quality, management efficiency and liquidity management. Financial performance will be measured using Return on Assets (ROA) and Return on Equity (ROE). The unit of analysis is Kenyan DFIs, with focus on five specific

institutions: Industrial and Commercial Development Corporation (ICDC), Kenya Industrial Estates (KIE), Agricultural Finance Corporation (AFC), Industrial Development Bank Capital Limited (IDB), and Tourism Finance Corporation (TFC). The time period covered spans financial years 2012/2013 to 2019/2020. Three of the DFIs (TFC, ICDC & IDB Capital) merged in 2021 to form Kenya Development Corporation, so the study period ends at 2019/2020.



CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter delves into various theoretical approaches relevant to the study's variables and the financial performance of organizations as outlined in the study objectives. Theoretical foundations will be developed and utilized to establish relationships among key variables, culminating in the formation of a conceptual framework. The chapter will further review empirical research, critique existing literature, and identify research gaps in the realm of financial performance drivers.

2.2 Theoretical Review

A theoretical review serves as a foundation for understanding the study's variables within a universal context. Utilizing multiple theories in both quantitative and qualitative research, as advocated by Creswell and Creswell (2017), helps establish robust bases for extracting and analyzing the constructs in this study. In this study, two key theories have guided the theoretical foundation: the Liquidity Preference Theory and the CAMEL Model.

2.2.1 Liquidity Preference Theory

The Liquidity Preference Theory introduced by Keynes challenges the constant money preference assumption. It outlines three money-holding motives: transaction needs income-expense bridging; precautionary reserves for unforeseen costs; and speculative motive from interest rate anticipation (Keynes, 1936). Uchendu (2011) notes it refuted constant preferences, while income velocity depends on complex variables. Ankintoye (2000) agrees velocity varies with interest rates, preferences, incomes, expenditures, substitutes and non-bank entities' presence.

Keynes identified transaction motives closing receipt-spending gaps; precautionary reserves for unexpected costs; and speculative motives from potential alternative asset losses if rates rise (Ogiriki and Andabai, 2014). The transaction motive exists since incomes and needs differ, necessitating balances for needs (Gbosi, 2005; Farooque et al., 2007). The transactions motive money demand refers to amounts required by institutions for daily operations to facilitate transactions, influenced by income amounts, intervals, and spending behaviors.

In summary, the theory challenges constant preferences, outlining motives driving variable liquidity demand influenced by economic and financial conditions. It guides understanding liquidity preferences role on institutional liquid assets and performance.

Ogiriki and Andabai (2014) define speculative motive as when financial institutions keep cash on hand to profit from changes in the price of bonds and securities, as opposed to precautionary motive, which is when the institutions want to keep some liquid money on hand to cover any unforeseen emergencies, contingencies, or accidents. The amount of revenue, employment, pricing, firm turnover, and the typical intervals between receiving income and disbursing cash are all elements that affect how the transaction balances change (Parker, 2007).

Jhingan (2004) agreed with the precautionary demand for money stemming from public desires to save for unexpected costs and advantageous purchase opportunities. Demand is influenced by arbitrary variables and interest rates according to Jhingan (2004). However, transactions and precautionary motives are income elastic but interest inelastic, implying demand declines with increasing rates represented by an (L) function. Demand is determined by income (Y) and M1 levels, where $M1 = L1Y$ (Ogiriki and Andabai, 2014).

Andabai (2011) noted speculative expectations regarding bond prices or market rates impact money demand. Keynes (1936) further posited interest rates are established in money markets, with exogenous money sources, though motivations affect money demand and spending levels. According to Nzotta (2014), individuals prefer holding wealth as liquid assets if higher future rates are anticipated to prevent investment losses associated with anticipated rate rises.

In summary, demand is driven by diverse motives like precautionary savings and speculation on rate changes, influenced by income, interest and uncontrollable factors as per Keynes' liquidity preference theory.

The liquidity preference theory states that individuals and institutions prefer holding liquid assets, such as cash or highly liquid securities, rather than illiquid assets. This theory can support the asset quality of development finance institutions (DFIs) in Kenya in that the DFIs face various risks in their operations, including credit risk, market risk, and liquidity risk. By adhering to the liquidity preference theory, DFIs maintain an adequate level of liquid assets that is readily converted into cash that helps them mitigate liquidity risk. Having sufficient liquidity ensures that DFIs meet their financial obligations, including the repayment of loans, even in times of financial stress or unexpected liquidity demands. This, in turn, supports the overall asset quality of DFIs by reducing the likelihood of default and improving their ability to meet their financial commitments.

2.2.2 CAMEL Model

The 1979 CAMEL framework structures bank examinations through ratios evaluating Capital adequacy, Asset quality, Management, Earnings and Liquidity. Widely used in performance/risk assessment by researchers, managers and central banks (Dang, 2011).

Adequate capital ensures absorbing shocks, though optimal levels debate balances shareholders' equity costs against regulators' failure-risk objectives (Koch, 1995). This study explores capital adequacy's DFI financial performance impact in Kenya. Liquidity management entails effective deposit/loan handling. The study investigates its influence on Kenyan DFI returns.

Efficient spending and operational competence notably affect profitability. High overheads can significantly reduce bank profits (Beck and Fuchs, 2014). This study examines expenditure management-profitability relationships for Kenyan DFIs. Encompassing growth, loans, earnings, management efficiency critically determines financial institution profitability. Exploring this driver's connection to performance is a study objective.

In summary, CAMEL furnishes a tested framework to evaluate capital, assets, management, earnings and liquidity drivers of institutional viability through this investigation.

The CAMEL model is relevant to this study due to its widely used framework for assessing the financial performance and soundness of financial institutions such as DFIs. The model provided that each component represents a critical aspect of a financial institution's operations. For instance, the management quality assesses the effectiveness and competence of the institution's management team in guiding its operations and decision-making. Understanding the drivers of management

quality within DFIs is crucial for evaluating their overall governance structure, strategic decision-making processes, risk management practices, and transparency. Examining factors such as leadership capabilities, board composition, corporate governance practices, and risk management frameworks provides insights into how management quality influences the financial performance of DFIs. Additionally, DFIs need to maintain sufficient liquidity to support their lending activities and respond to unexpected liquidity demands. Therefore, examining the drivers of liquidity, such as funding sources, liquidity management strategies, and regulatory compliance, provides depth into how DFIs manage their liquidity and the impact of liquidity on their financial performance in Kenya.

2.3 Empirical Review

2.3.1 Effect of Asset Quality on Financial Performance

Asset quality notably influences financial institution profitability as assets such as loans, investments and property holdings comprise the primary income sources. Given this, loan portfolio quality represents a key determinant as loans typically form the largest proportion of assets. Non-performing loan ratios serve as useful metrics, with lower ratios indicating healthier portfolios. The quality level directly determines profitability level since the greatest risk financial institutions face is losses from delinquent loans (Dang, 2011). Therefore, non-performing loan ratios provide the strongest proxies for asset quality assessment. Previous research revealed a positive relationship between profit rates and asset quality indicators, demonstrating higher profit margins accompanying improved asset maintenance (Sangmi & Tabassum, 2010; Ongaki, 2012). While crucial, asset quality alone does not dictate overall institutional performance - factors like capital adequacy, management competence, earnings and liquidity also exert influence (Kimanzi, 2015). Weak asset quality and liquidity specifically constitute the two primary triggers of financial institution failures, as evidenced by numerous Kenyan bank collapses in the early 1980s resulting from poor portfolio maintenance.

According to (Waweru & Kalani, 2009) historical data demonstrates that poor asset quality and low liquidity levels have been major contributors to the failure of financial institutions. In Kenya, during the early 1980s, 37 banks collapsed due to non-performing loans during the banking crises of 1986-1989, 1993-1994, and 1998 (Mwega, 2009). With insider lending, often to politicians, playing a significant role in many of these bank failures (Cheruiyot, 2016).

Emphasizing the significance of non-performing loans, it becomes evident that credit risk management takes precedence over other aspects of DFIs' functioning (Kahindi, 2019). Focusing on non-performing loans may divert a significant portion of a DFI's resources towards recovery procedures instead of business expansion (Klagge, 2020; Shaikh, Ismail, & Shafiai, 2017). As a consequence, NPLs significantly impact the performance and profitability of DFIs (Chin & Gallagher, 2019). Furthermore, NPLs can hinder credit expansion for productive purposes (Githua, 2015), potentially leading DFIs to opt for safer, lower-risk investments that may not be conducive to overall economic growth (Shaikh, Ismail, & Shafiai, 2017). Attridge et al. (2019) underscore that non-performing assets in loan portfolios can also affect operational efficiency, with subsequent implications for profitability, liquidity, and solvency positions of DFIs.

Gabriel, Victor, and Innocent (2019) conducted an analysis of how asset quality impacts the financial performance of commercial banks in Nigeria. Utilizing regression analysis, their study revealed a negative and significant relationship between non-performing loans and financial performance. It's important to note that this study was conducted in Nigeria, utilizing dynamic panel data modeling, while the present study focuses specifically on DFIs in Kenya.

Budiarto (2021) assessed the impact of asset quality on the financial performance of BPR in Central Java, emphasizing the role of empathy credit risk. Their data analysis, employing SEM AMOS, showed that credit collectability and non-performing loans had a significant relationship, with empathy credit risk moderating this influence. Notably, this study was conducted within BPR in Central Java, and the current study examines DFIs in Kenya.

2.3.2 Effect of Management Efficiency on Financial Performance

In assessing the financial performance of financial institutions, the efficiency of expenditure management is a significant factor. Poor management of expenditures is a primary contributor to reduced profitability (Sufian & Chong, 2009). The Cost-Income Ratio (CIR) is commonly used in

the banking industry to gauge managerial efficiency, and studies have indicated that local banks often exhibit higher CIR compared to their global counterparts, necessitating cost reduction for global competitiveness (Mathuva, 2009).

Beck and Fuchs (2004) examined factors driving high interest margins in Kenyan banks, identifying overheads as a key component. Specifically, staff wage costs were relatively higher versus peers in Sub-Saharan Africa. However, the link between expenses and profits is complex. In less competitive markets affording bank market power, increased costs can be transferred to customers through pricing, potentially creating a positive relationship between overhead and profitability (Flamini et al., 2009). Indeed, Neceur (2003) found overhead costs positively and significantly impacted performance, implying these were sometimes passed on through lower deposit rates or higher loan rates. While high costs intuitively reduce earnings, market conditions that allow cost-shifting can obscure this dynamic, necessitating empirical investigation of the management efficiency-performance nexus in the specific Kenyan DFI context.

Yadav and Katib (2015) examined the technical efficiency of Malaysia's Development Financial Institutions using a Two-Stage DEA Analysis. Their findings suggest that managerial inefficiency had a greater role in overall technical inefficiency compared to scale inefficiency. Additionally, the study revealed that only specific institutions achieved constant returns to scale during the period analyzed. Nevertheless, it's crucial to recognize that this study was conducted in Malaysia, using dynamic panel data modeling, while the present research centers on DFIs in Kenya.

Ngumo, Collins, and David (2017) investigated the variables affecting the financial performance of microfinance institutions in Kenya. Their analysis revealed a direct association between the financial performance of Kenyan microfinance banks and their operational efficiency. However, this study primarily focused on the factors influencing MFBs' financial performance, whereas the current study concentrates on factors affecting the financial performance of Development Financial Institutions in Kenya.

Ikapel, Namusonge, and Sakwa (2019) evaluated the effect of financial management on the financial performance of Kenyan commercial banks over a ten-year period. Their analysis found a strong and positive correlation between managerial efficiency and the financial performance of commercial banks. While the study primarily focused on management efficiency, it also identified

other crucial factors contributing to commercial banking performance. The present analysis expands its focus to encompass Development Financial Institutions in Kenya.

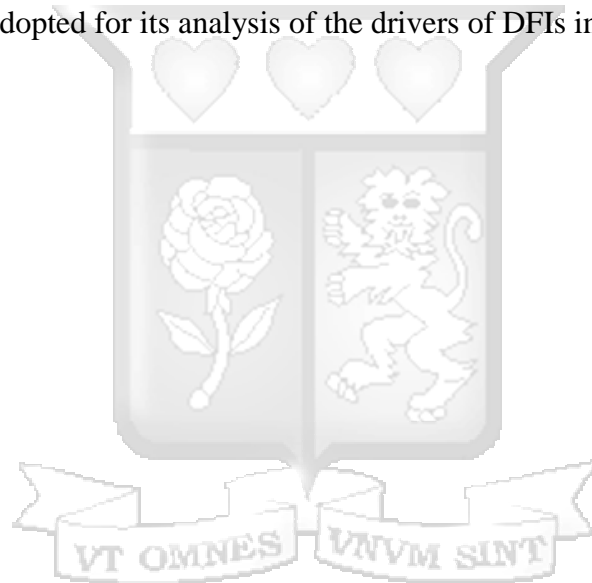
2.3.4 Effect of Liquidity Management on Financial Performance

A previous study by Edem (2017) examined the relationship between liquidity management and performance of deposit money banks in Nigeria from 1986 to 2011. It analyzed all 24 banks in the industry over the specified period using descriptive, correlational and inferential analyses. The findings revealed significant connections between liquidity management variables (liquidity and cash reserve ratios) and return on equity (ROE), with positive impacts observed. However, a negative impact was seen for the loan-to-deposit ratio. Notably, this preceding research only considered ROE as the measure of performance, whereas the present study employs both ROA and ROE to gauge financial performance. Overall, Edem's (2017) work provided insight into the impact of liquidity management on bank profitability in Nigeria. However, the current study expands the analysis to a differing context of developmental finance institutions in Kenya, while also utilizing a more comprehensive dual-metric of performance comprising ROA alongside ROE.

Manoj et al. (2018) evaluated performance of major Indian public sector banks using CAMEL metrics through descriptive statistics. They analyzed five large state-owned commercial banks, identifying liquidity measured by liquid assets to total assets as an important indicator. However, their study did not examine the causal relationship between liquidity levels and financial performance metrics in DFIs specifically. The current research aims to fill this gap by empirically investigating the influence of liquidity on key profitability and other outcome variables in Kenyan DFIs beyond just descriptive assessment. While providing insights on CAMEL application and liquidity's role, the prior work did not test liquidity management impacts on DFI results. This study therefore expands understanding by addressing the causality aspect not explored previously to give a more comprehensive view of liquidity's effects on developmental institutions.

Mugo and Mutsweje (2020) examined how liquidity regulation impacts the financial performance of commercial banks in Kenya. Analyzing data from 42 banks, the study revealed that liquidity regulation significantly affected the financial performance of commercial banks in Kenya. Although their research centered on liquidity and financial performance within the Kenyan context, the present study uniquely focuses on Development Financial Institutions in Kenya.

Akims, Kiio, Tenai, and Akims (2021) investigated how liquidity affects the profitability of Microfinance Banks in Kenya, utilizing agency theory and capital buffer theory. Their panel regression analysis indicated that liquidity regulation was not significant in affecting the profitability of Microfinance Banks in Kenya. Although the study considered liquidity, capital and credit regulations it isolated the significance of management efficiency in affecting the profitability of the microfinance banks in Kenya. Furthermore, this study although was conducted in Kenya, it differs in contextual areas as the former was tied to microfinance banks while the focus of this survey was on the Development Financial Institutions in Kenya. Theoretically, the former survey was predicated on the aforementioned theories, however, ignored the relevance of liquidity preference theory and the CAMEL model in explaining profitability of the microfinance banks in Kenya which this study adopted for its analysis of the drivers of DFIs in Kenya.



2.4 Summary of Research Gaps

Table 2.1: Summary of Research Gaps

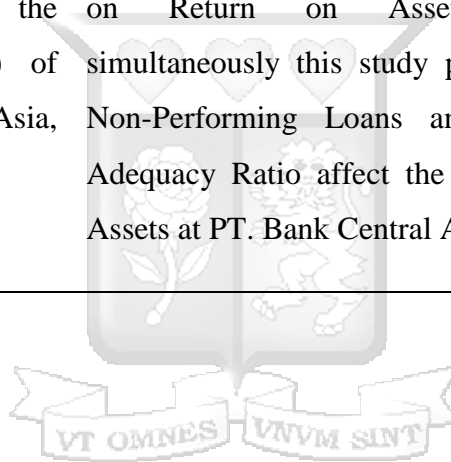
S/N	Author(s)/Year	Title	Findings	Research Gap
1	Gabriel, Victor and Innocent (2019).	Effect of asset quality on the Financial Performance of Commercial Banks in Nigeria.	The study established that Non-Performing Loans negatively and significantly affected Financial Performance of Commercial Banks in Nigeria	The study, however, was conducted in Nigeria and utilized a dynamic panel data modeling, whereas the current study focuses on DFIs in Kenya.
2	Budiarto (2021)	The Impact of asset quality Towards Financial Performance of BPR in Central Java, the Role of Empathy Credit Risk	Data analysis using SEM AMOS shows the result that credit collectability (business prospects, debtor performance, and ability to pay) have a positive significant relationship with non-performing loans (NPLs). Non-performing loans have a negative significant effect on the financial performance of banks. Empathy credit risk moderates the influence of business prospects, debtor performance, and ability to pay with non-performing loans (NPLs).	The study was, however, conducted within BPR in Central Java, while the current study examines DFIs in Kenya.

3	Yadav and Katib (2015)	Technical Efficiency of Malaysia's Development Financial Institutions: Application of Two-Stage DEA Analysis	Results show that managerial inefficiency had a greater role in overall technical inefficiency compared to scale inefficiency. Additionally, the study revealed that only specific institutions achieved constant returns to scale during the period analysed.	Nevertheless, it's crucial to recognize that this study was conducted in Malaysia, using dynamic panel data modelling, while the present research centres on DFIs in Kenya.
4	Kingu, Macha, &Gwahula (2018)	Impact of non-performing loans on bank's profitability: Empirical evidence from commercial banks in Tanzania.	The study found that the occurrence of non-performing loans is negatively associated with the level of profitability in commercial banks in Tanzania.	The study, however, was conducted in Tanzania and utilized a dynamic panel data modeling, whereas the current study focuses on DFIs in Kenya.
5	Mohammed, Muter i& Samantar (2019)	Factors affecting loan repayment performance of banks in Garowe, Puntland, Somalia	There is a considerable relationship seen between the performance of loan repayment and the characteristics of the borrowers in Garowe. There is also a significant relationship seen between the loan characteristics and loan repayment performance as well as a significant relationship between the	The study focused on an Islamic bank, but the current study will focus on DFIs in Kenya.

purpose and performance of banks in Garowe district.

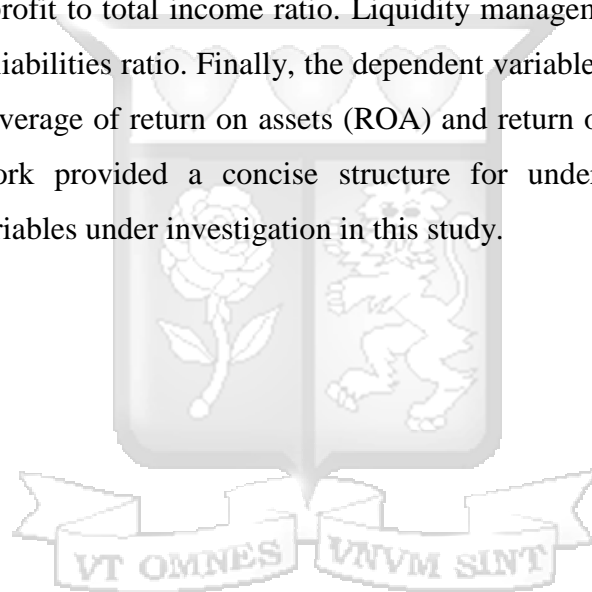
- 6 Anggriani, & Muniarty, (2020). Influence between Non-Performing Loans and Capital Adequacy Ratio both partially and simultaneously on the Profitability (ROA) of PT. Bank Central Asia, Tbk
- The results of this study prove that Non-performing Loans do not affect the Return on Assets. However, Capital Adequacy Ratio has a significant effect on Return on Asset. While simultaneously this study proves that Non-Performing Loans and Capital Adequacy Ratio affect the Return on Assets at PT. Bank Central Asia, Tbk
- Anggriani, and Muniarty only applied ROE to assess performance while the current study will apply both ROA and ROE

Source: Researcher (2022)



2.5 Conceptual Framework

The conceptual framework provides a visual representation of the theoretical relationships between variables in a study (Abadalla, 2017). In this research, the conceptual framework outlined the key variables and how they relate based on the problem statement. This set the stage for presenting the specific research objectives and hypotheses that guided the assessment. The framework diagrammatically depicted the study variables and how they would be measured. It conceptually linked explanatory factors like asset quality, management efficiency, and liquidity management to the financial performance of Development Finance Institutions (DFIs). Asset quality was operationalized as the non-performing loans to loan loss provision ratio. Management efficiency utilized the operational profit to total income ratio. Liquidity management was measured as the current assets to current liabilities ratio. Finally, the dependent variable of financial performance was captured using the average of return on assets (ROA) and return on equity (ROE). Overall, the conceptual framework provided a concise structure for understanding the theoretical relationships between variables under investigation in this study.



Independent Variables

Dependent Variable

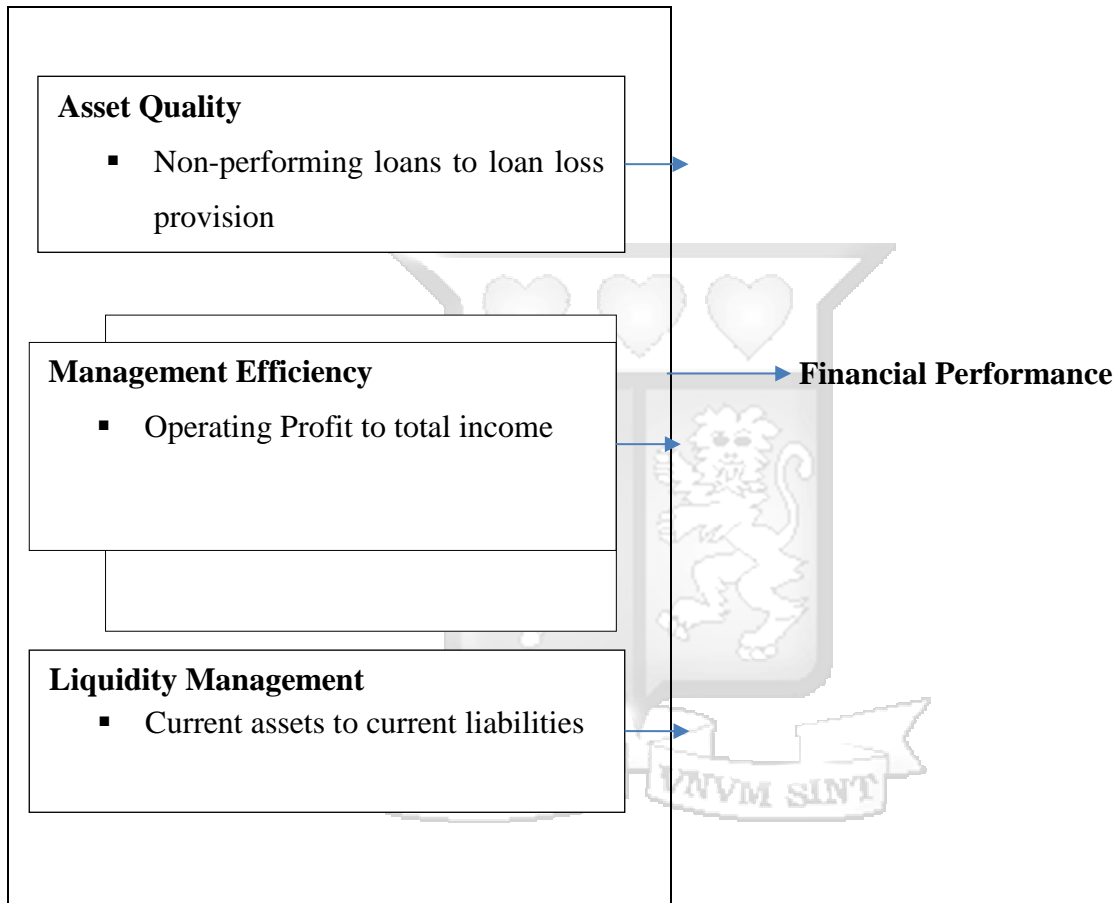


Figure 2.1: Conceptual Framework.

2.8 Operationalization of Variables

Table 2.2: Operationalization of Variables

Variables	Type	Measurement	Data collection Tool	Data Analysis
Asset Quality	Independent Variable	Non-performing loans to loan loss provision	Data extraction form	<ul style="list-style-type: none"> ▪ Descriptive tests ▪ Panel regression analysis
Management Efficiency	Independent Variable	Operating Profit to income	Data extraction form	<ul style="list-style-type: none"> ▪ Descriptive tests ▪ Panel regression analysis
Liquidity Management	Independent Variable	Current assets to liabilities	Data extraction form	<ul style="list-style-type: none"> ▪ Descriptive tests ▪ Panel regression analysis
Financial Performance	Dependent Variable	Average of ROA and ROE	Data extraction form	<ul style="list-style-type: none"> ▪ Descriptive tests ▪ Panel regression analysis

Source: Researcher (2021)

2.9 Summary of Literature Review and Research Gaps

This section revealed the existence of research gaps, which encompass contextual, conceptual, and knowledge-based gaps. Prior studies on macroeconomic and institutional factors and their impact on the financial performance of financial institutions primarily focus on developed countries, rather than Kenya. These studies yield mixed and inconclusive results, highlighting contextual and knowledge gaps. Furthermore, previous research on asset quality and financial institution performance fails to consider the specific relationship between asset quality and the financial performance of DFIs, representing a conceptual gap. This study aims to address these literature gaps analysing the drivers of financial performance in Kenyan DFIs.



CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter introduces the research design, population, sampling methods, sample size, data collection techniques, data analysis, research quality, and ethical considerations. It presents a comprehensive overview of the research approach.

3.2 Research Philosophy

In this study, positivism philosophy is employed. This philosophy emphasizes the generation and testing of empirically verifiable hypotheses (Basias & Pollalis, 2018). While it is valuable for explaining lived experiences, it cannot directly measure unobservable phenomena, making it important to focus on the experiences of the study's respondents (Babbie, 2020; Fletcher, 2017). “It is problem based and integrates new knowledge with existing knowledge and allows for creation of original work or innovative procedures (Synder, 2019; Mays & Pope, 2020).” The study aims at describing the lived experience. It focuses on experience that respondents go through. However, experience is not observable by an external observer (Attia & Edge, 2017). This implies that knowledge generated is not measurable and cannot be tested to allow statistical justification of the conclusion (Kornberger, &Mantere, 2020; Portney, 2020).

3.3 Research Design

The study adopted an explanatory research design to investigate relationships between independent variables (asset quality, management efficiency, liquidity management) and the dependent variable (DFI financial performance).

This design examines whether changes in one variable lead to changes in another, controlling for other potential influencing factors. It has proven valuable in prior related studies.

Explanatory research is important for understanding causal relationships between variables, achieving objective results, improving business processes, and ensuring reliable, replicable data.

By conducting causal investigation, the researcher comprehends dependent variable impacts from explanatory factors, leading to informed decision-making regarding Kenyan DFIs.

The design provides solutions regarding practical data collection and time/cost constraints. It allows investigating whether changes in independent variables cause changes in the financial performance dependent variable when controlling for other factors. This supports the objective of determining influence and causal links between the variables of interest.

3.4 Population and Sampling

The population consists of all individuals, objects or events that a researcher is interested in generalizing results to (Cooper & Schindler, 2014). It is defined by attributes that establish its boundaries. This study focused on the target five Kenyan DFIs listed in Appendix II, representing the total population. Given the small size, a census approach was deemed suitable relative to timeframe and scope (Chege et al., 2019).

Census sampling examines all population units (Chandran, 2013), which occurred here as the DFIs comprised both population and sample owing to manageability (Chimkono et al., 2016; Mugenda & Mugenda, 2013). Since the target DFIs were examined comprehensively without exclusion, a census method aligned with feasibility and aim of covering the whole population. The limited number of DFIs in Kenya precluded sampling, necessitating an all-inclusive census instead for population representativeness as per parameters of the research context.

3.5 Data Collection Techniques

This study utilized secondary data to obtain necessary information relating to the stated objectives. Sources like CBK Bank oversight reports, online resources, and DFI reports were reviewed to gather pertinent information. Financial statements from the DFIs spanning eight fiscal years between 2012/2013 and 2019/2020 were analysed to examine the relationship between hypothesized drivers and measured dimensions of financial performance. Relying on pre-existing documents minimized resource needs compared to primary data collection. Published records from regulatory and institutional entities furnished standardized performance metrics covering an adequate timeframe to empirically test proposed linkages through statistical techniques applied to

retrospective financial statement information. Secondary data served as a convenient, efficient means of gathering ample numerical data required for quantitative analysis.

The time period chosen for data collection was eight years, from 2012/2013 to 2019/2020. This timeframe was selected to establish changes in DFIs over time and use recent data for analysis. The period was also important as several regulations for financial institutions had been implemented. Major reforms and restructuring of DFIs began in 2013, aimed at improving financial performance. Kosikoh (2014) noted a timeframe longer than five years could aid calculating ratios of independent and dependent variables across multiple years, enhancing analysis. Therefore, data on dependent and independent variables was gathered from financial statements of various DFIs using a secondary data collection form. Secondary data incorporated assets, equity, liabilities and other financial information necessary for data examination.

3.5.1 Validity of Data

Validity refers to how accurately a study measures what it set out to measure. They are of different types, including content validity which ensures variables fully capture the concept being measured. Hair, Money, Page and Samouel (2009) and Fraser et al. (2018) define validity similarly as the degree to which a study's elements reliably and consistently represent the real meaning of the concepts under investigation. Common forms are content, face and construct validity. This study ensured content validity, which refers to the degree to which dimensions and items of a measure are relevant to and representative of the target concept. By focusing on content validity, the researcher established that the variables used appropriately represented and aligned with the concepts being assessed.

3.5.2 Reliability of Data

Reliability pertains to the consistency of measurement results and the degree to which they are free from random error. It indicates how well a study can produce stable and consistent results over time. Melcher & Beck (2018) and Bryman & Bell (2011) define reliability similarly as the level of accuracy and dependability provided by a measure. Reliability acts as the link between the theoretical concept and the observable data. In this study, data reliability was ensured through the use of audited financial statements. Audited financial reports are validated by auditors and

standardized accounting practices, hence providing assurance the data accurately represents underlying information without bias or distortions. The auditing process gave the collected secondary data stability and reliability by reducing random errors, establishing its dependability for drawing conclusions. Using reliable and consistent data sources enhanced the integrity and trustworthiness of findings and interpretations.

3.6 Research Quality

The following diagnostic tests were performed to meet the requirements of panel regression analysis:

a) Stationarity Test

In the context of time series, a stationary process is one where the statistical properties such as the mean, variance, and autocovariance are constant over time (Enders, 2014). This is important because many time series analysis techniques assume stationarity. However, due to the dynamic and time trend as well as nature of data, most appears to be non-stationary thus informing the evaluation of the stochastic properties of to avoid spuriousity of the outcomes (Brooks, 2014). This test is guided by 0.05 significance level as threshold. The factors employed in the study were tested to determine the presence of unit root and in the event where the factor exhibits unit root, such factor was differenced. The test employed Fisher-type test where Augment Dickey-Fuller test was run to arrive at the stationarity of the variables in the investigation. The ADF test is designed to handle autoregressive structures, allowing for the inclusion of lagged dependent variables in the test equation (Kripfganz & Schneider, 2023). This is particularly useful when dealing with time series data that exhibit serial correlation or dependence (Fulcher, 2018).

b) Normality Test

Normality testing was conducted as part of the regression analysis to assess whether the assumption of a normal distribution of errors was met. The classical linear regression model assumes the errors follow a normal distribution with a mean of zero and constant variance. Al-Labadi, FazeliAsl and Saberi (2020) also describe this assumption. This study used statistical functions in STATA software to test the normality of variable distributions. Specifically, the Shapiro-Wilk test was employed as it is suited for smaller sample sizes. As Henze and Visagie (2020) explain, a non-significant result above 0.05 from this test indicates the variable is likely

normally distributed, whereas a significance below 0.05 means it deviates from normality. By running the Shapiro-Wilk normality test at a significance level of 0.05, this study was able to verify whether the variables met the normal distribution requirement for regression or if data transformations were necessary.

c) Multicollinearity Test

Multicollinearity refers to strong correlations among independent variables in regression which can inflate their standard errors and misidentify insignificant predictors. Mohammaddi (2020) defined it. Field notes low multicollinearity poses minimal risk, but higher levels increase type II errors and unstable equations as β coefficient errors rise. To test for it, this study generated a correlation matrix, variance inflation factors (VIFs), and tolerances as suggested by Field. VIFs mathematically indicate $1/(1-R^2)$. Gujarati (2004) views tolerances closer to 1 as evidence of no collinearity. Field considers VIFs substantively above 1 suggestive of multicollinearity bias. The presence, as defined by a tolerance under 10, means one variable can predict another's outcome. Therefore, this study utilized VIFs, tolerances and eigenvalues to gauge possible multicollinearity issues, with VIFs determined as $1/(1-R^2)$ and tolerances/VIFs informing decisions about predictor independence as per the specified thresholds. This allowed evaluating whether strong relationships between independent variables could influence the regression analysis.

d) Homoscedasticity Test

Homoscedasticity refers to having equal variance of errors across all independent variable values. Gignac and Zajenkowski (2020) note heteroscedasticity distorts results and increases type 1 error risks by weakening analysis. To minimize this issue, the study ensured normal data distribution and proper regression functional form, as recommended. The Godfrey-Pagan test, which has a 0.05 threshold, was used to specifically check for heteroscedasticity. When the assumption of homoscedasticity is violated and heteroscedasticity is present, it invalidates conclusions drawn from regression analysis since the variance is no longer constant. Therefore, this study utilized the Godfrey-Pagan test at a 0.05 significance level to empirically verify whether heteroscedasticity existed among the regression residuals and if remedial measure were required to produce consistent and reliable results. Adhering to these practices helped reduce potential bias from incorrect assumptions.

e) Autocorrelation Test

Autocorrelation refers to the correlation between the errors (residuals) of a model across consecutive time periods or observations. When autocorrelation is present, the least squares (OLS) estimates of regression coefficients become less efficient and can lead to incorrect Tstandard errors, t-statistics, and misleading statistical inference (Baltagi, 2011). In time series data, autocorrelation can arise due to various factors, such as seasonality, trending, or serial dependence. If autocorrelation is not accounted for, it can lead to biased estimates and incorrect conclusions (Fomby, Johnson & Hill, 1984). To detect and address autocorrelation, several diagnostic tests and remedies are available in regression analysis. Common diagnostic tests include the Durbin-Watson test, the Breusch-Godfrey test, and the Ljung-Box test, among others (Wooldridge, 2010). Therefore, this study adopted Breusch-Godfrey test due to the lower standard deviations and better performance at large autocorrelation levels compared to other methods. The presence or absence of autocorrelation was judged based on 0.05 significance level.

f) Hausman Specification Test

In panel regression analysis, it becomes imperative to carry out a specification test which serves as a basis for adopting a model for estimation. The test is aimed at making a decision between adopting fixed effect model or random effect model. The test is based on a hypothesis which favours the adoption of the random effect model and alternatively the fixed effect model. The decision guiding the acceptance or rejection of the null hypothesis is judged by 0.05 level of significance.

3.7 Data Analysis

The study utilized a panel data approach to conduct the analysis over an 8 year period from 2012/2013 to 2019/2020. Panel data is advantageous compared to cross-sectional data as it provides more detailed information with a larger dataset (Blundell & Bond, 1998; Hoechle, 2007). Specifically, panel data usually yields more observations which improve statistical power and precision of estimates, as noted by Cheng Hsiao (2004). The increased data points offer higher degrees of freedom while reducing collinearity, thereby enhancing efficiency of econometric modeling (Cheng Hsiao, 2004). Another advantage highlighted is the ability to examine economic issues more comprehensively than would be possible with pure cross-sectional or time series data alone. In summary, panel data techniques were suited for this research given the benefits of control

and insight afforded by the longitudinal multi-dimensional dataset spanning both time and entities under investigation. Descriptive, correlation and panel regression analyses were employed. The panel regression analysis takes the following form:

$$FP_{it} = \beta_0 + \beta_1 AQ_{it} + \beta_2 ME_{it} + \beta_3 LM_{it} + \varepsilon$$

Key:

FP = Financial Performance

AQ = Asset Quality

ME = Management Efficiency

LM = Liquidity Management

$\beta_1 - \beta_3$ = Regression Coefficients

i = Firm

t = Time period

ε = Error Term

3.8 Ethical Considerations

This study sought to contribute new insights into the factors influencing financial performance of Development Finance Institutions (DFIs). In doing so, the researcher ensured appropriate and ethical conduct of the research as per the standards of Strathmore University in Kenya. An important step involved obtaining approval from relevant authorities after successfully defending the proposal. Specifically, a research permit was secured from the National Commission for Science, Technology and Innovation (NACOSTI) as mandated. Seen through this lens, the study aimed to add value to academic knowledge while fully adhering to procedures and guidelines governing research activities in the given jurisdictional and institutional contexts

CHAPTER FOUR
PRESENTATION OF RESEARCH FINDINGS

4.1 Introduction

The study examined survey results using both descriptive and panel regression analysis methods. findings were discussed in relation to the research objectives. The analysis specifically evaluated the impact of drivers on Kenyan Development Finance Institutions' financial performance.

Drivers were broken down into asset quality, management efficiency and liquidity management categories. Analysis then determined how each of these influence the institutions' financial performance both descriptively and through regression modelling techniques.

By taking this two-pronged quantitative approach, the researcher gainfully described trends over time and empirically tested relationships between independent and dependent variables of interest. This provided a more robust assessment of how the hypothesized drivers affected DFI profitability and overall viability over the sample period.

4.2 Descriptive Statistics

The descriptive technique was employed to characterize the study data by estimating individual parameters underlying the research information. Descriptive statistics encompass both central tendency and variability measurements. Standard deviation, variance, minimum/maximum values, kurtosis and skewness represent variability measures while mean, median and mode indicate central tendency (Kaur et al., 2018). To summarize the inquiry data vis-a-vis standard deviation, variance, minimum/maximum element values and their means, descriptive statistics were utilized. This allowed depicting trends over time through statistical summaries like averages, dispersions from averages and outlier ranges for each variable. Such metrics facilitated analysing overall data patterns to contextualize subsequent inferential statistical modelling seeking to identify significant relationships between the study variables.

A summary of the factors' descriptions was presented in Table 4.1.

Table 4.1 Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Financial Performance	40	3.175	14.935	-9	90

Asset Quality	40	6.579	18.475	0.946	99.408
Management Efficiency	40	0.040	0.411	-0.754	0.772
Liquidity Management	40	9.414	13.400	0.037	59.588

Source: Study Data (2023)

The descriptive data in Table 4.1 showed that financial performance had a mean of 3.175 and a standard deviation of 14.935. The financial performance score ranges from -9 to 90, with the average number falling between those two extremes. This indicates that the Kenyan Development Financial Institutions' financial performance differed greatly. As a result, the Kenya's Development Financial Institutions' financial performance varies largely depending on the operational efficiency of the institutions in the utilization of the financial performance drivers. Due to the unique context of the study, the sample size is considered adequate. This is in consideration of not just the number of firms but also the time scope of the study especially as a census approach was utilized.

4.3 Diagnostic Tests

The study ran a number of diagnostic tests to ensure that the classical linear regression model's (CLRM) hypotheses had not been falsified. Diagnostics may be used to verify the accuracy of the results and forecast how the characteristics of development Finance Institutions would affect the credit risk of Kenya's DFI's. Williams, Grajales and Dason (2013) observed that the correction of misconceptions about the OLS assumptions entails carefully considering the reasonableness of the assumptions in the context of a particular dataset and analysis is an important prerequisite to drawing of trustworthy conclusions from the data. According to Kerlinger (1998) any violation of the classical linear regression assumptions would cast doubt on the validity of the conclusions drawn. This investigation's pertinent diagnostic methods included tests for normalcy, multicollinearity, heteroscedasticity, stationarity, and fixed or random effects.

4.3.1 Stationarity Test

Since non-stationary series invalidate standard statistical tests because their variance is not constant, Asteriou and Hall (2007) claim that stationarity is a fundamental idea underlying time series operation. It makes sense to include major time series variables in the regression model if it is determined that they are stationary. The Fisher-type test was employed to evaluate if the variables were stationary or not. The test made use of the Augmented Dickey-Fuller (ADF) in the

evaluation of the stationarity of the variables. The null hypothesis in this test was the unit root of the variable. Another explanation was that the variable might not have unit roots. The results of the test for stationarity were shown in Table 4.2.

Table 4.2 Fisher-type unit root test

Variable	Statistic	P-value	Comment
Financial Performance	88.082	0.0000	Stationary
Asset Quality	74.978	0.0000	Stationary
Management Efficiency	87.110	0.0000	Stationary
Liquidity Management	23.817	0.0081	Stationary

Source: Study Data (2023)

The findings in Table 4.2 demonstrated that all the variables were stationary, which means they lacked unit roots, at the 0.05 level of significance. The results of this test showed that the variables' mean and variance were constant throughout the investigation period. The absence of unit roots in the study's variables means that there is no possibility of erroneous results. According to Gujarati (2003), the significance of the discovery is that the outcomes are valid.

4.3.2 Normality Test

A few examples of statistical tests that depend on the premise that the residuals are distributed normally or gamma-symmetrically include the t-test, correlation, regression, and analysis of variance (González-Estrada & Cosmes, 2019). Hence, a critical requirement in the classical linear regression is that the residuals must be normally distributed with zero mean and constant variance (Enders, 1995). The populations from which the samples are drawn are thought to have a normal distribution. To ascertain if the sample residuals came from a population with a regularly distributed population, the normality test of the Shapiro-Wilk test was applied. As a result, when the p-value is high and greater than 0.05, the residuals are considered normal; otherwise, they are not. The results of the normality tests are shown in Table 4.3.

Table 4.3 Shapiro-Wilk test for Normality

Variable	Obs	W	V	Z	Prob>z
Financial Performance	40	0.397	23.831	6.673	0.0000
Asset Quality	40	0.382	23.478	6.621	0.0000

Management Efficiency	40	0.961	1.525	0.887	0.1874
Liquidity Management	40	0.637	14.343	5.605	0.0000

Source: Study Data (2023)

The Shapiro-Wilk test result confirmed normality, with the exception of the efficiency of management in the investigation, since the p-value was over 0.05, it implies that there is not enough evidence to conclude that the residuals significantly deviate from a normal distribution, and it can be reasonably assumed that the residual follows a normal distribution. The tests failed to reject the hypothesis of normality when the p-value is greater than or equal to 0.05 (Shapiro & Wilk, 1965). The results of all other explanatory variables, however, suggest that the null hypothesis was not accepted, which indicates that the residuals significantly deviate from the normal distribution. The results showed that the p-values of these variables (financial performance, asset quality and liquidity management) were less than the predetermined limit of 0.05 for the study, implying that the null hypothesis of residual normal distribution was rejected. Therefore, drawn from the outcome, the residuals are not normally distributed. This therefore, goes against the null statement that the residual is normally distributed. Despite this result, regression's normal distribution assumptions were therefore supported by the large data used in the study. As pointed out by Akims (2016), the central limiting theorem stipulates that a sample size of 30 or more is assumed to have a regularly distributed population. The assumption of normality is made disregarding the normality issue because the sample size for this study is bigger than 30, which negates the need for a larger sample size. These results concur with those of Ghasemin and Zahediasi (2012), who maintain that the variables should be broadly normally distributed, particularly if the conclusions are to be applied to a larger population than the sample. The large sample size of the investigation allows the estimation of panel multiple regressions using OLS regression.

4.3.3 Multicollinearity Test

According to Portney (2020), multi-collinearity can occur in multiple regression models in which some of the independent variables are significantly correlated among themselves. The Variance Inflation Factor test, which has been used by others including Besley (1991), Gujarati (2003), and Cooper and Schindler (2008), was used in the study to test for multicollinearity. According to the experts, a VIF of less than 10 suggests moderate multicollinearity, whereas a VIF of more than 5 shows severe collinearity among the explanatory factors. Furthermore, Wooldridge (2011)

observed that multicollinearity happens when VIF is larger than 10 and tolerance is less than 0.1. The VIF results were displayed in Table 4.4.

Table 4.4 Tests for Multicollinearity

Variable	VIF	1/VIF
Asset Quality	1.02	0.977
Management Efficiency	1.02	0.982
Liquidity Management	1.01	0.993
Mean VIF	1.02	

Source: Study Data (2023)

All of the covariates had VIF values that were less than 10, which corresponded to the research's cutoff, as evidenced by the VIF products in Table 4.4. Consequently, the issue of multicollinearity does not represent a threat to the subsequent estimation of the investigation's parameters using the regression strategy of analysis. Therefore, following the tolerance level across the survey variables of 0.977, 0.982 and 0.993, the outcomes confirmed the postulations made by Wooldridge (2011) noting that multicollinearity occurs when VIF is larger than 10 and tolerance is less than 0.1.

4.3.4 Homoscedasticity Test

For the regression model, it is assumed the error terms have constant variance, known as homoscedasticity. If this assumption is violated and error variances differ systematically with independent variables, it indicates heteroscedasticity - the variance of residuals is not constant.

Since constant variance is a core OLS assumption, a test was performed to determine if it was false in this case, to assess if variance was heteroscedastic. The Breusch-Pagan test for heteroscedasticity was used. This analyses the model by testing whether the error term variance depends on independent variable values. It determines if the assumption of homoscedasticity is valid. (White, 1980).

By conducting this test, the researcher could evaluate if error variances changed in relation to predicted values, violating the constant variance premise. This allowed appropriately selecting analysis methods robust to heteroscedasticity if the assumption did not hold for the regression model. Table 4.5 displayed the Breusch-Pagan-Godfrey test results.

Table 4.5 Breusch-Pagan/Cook-Weisberg test for heteroskedasticity

Breusch-Pagan / Cook-Weisberg test for heteroscedasticity			
Ho: Constant variance			
Variables: fitted values of Financial Performance			
Chi2(1)	=	10.73	
Prob > chi2	=	0.0011	

Source: Study Data (2023)

The findings showed that the observed probability chi square significance of 0.0011 was significant; as a result, the existence of homoscedasticity was rejected, and heteroskedasticity was found. As a result of the results, it is noteworthy that the effectiveness of the parameters could not be verified, rendering them invalid. These outcomes are corroborated by Vynck (2017), who submits that fitting ordinary least squares regression models (a technique that presumes homoscedasticity) results in inefficient regression parameter estimators and a biased and inconsistent covariance matrix estimator. Given this output, the conduct of robust standard error was necessitated to arrive at efficiency in the estimated parameters.

4.3.5 Autocorrelation Test

Using the Breusch test as a diagnostic instrument, this study explored the intriguing possibility of the existence of initial-order autocorrelation within the model. The fundamental premise guiding this investigation was the nonexistence of such autocorrelation, acting as the base assumption. Additionally, the examination strictly followed a significance threshold of 0.05. The comprehensive findings from this evaluation can be found in Table 4.6.

Table 4.6: Autocorrelation Test Results

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	0.017708	Prob. F(1,33)	0.8949
Obs*R-squared	0.020380	Prob. Chi-Square(1)	0.8865

Source: Study Data (2024)

By utilizing the Breusch test with a predetermined significance level set at 0.05, this research delved into the possibility of detecting initial-order autocorrelation within the model. The

examination led to a noteworthy outcome, as the calculated p-value of 0.8949 was deemed statistically insignificant, surpassing the 0.05 threshold. This lack of statistical significance supports the acceptance of the null hypothesis, indicating the absence of first-order autocorrelation within the regression model. As a result, it can be concluded that the regression model does not exhibit any noticeable first-order autocorrelation and hence, the model was free from the problem of autocorrelation.

4.3.6 Hausman Specification Test

Panel regression estimators must compare fixed effect and random effect models to decide which is more suitable for the enquiry (Baltagi, 2005). To determine which model was most appropriate, the Hausman Test was used to estimate both the fixed effect and random effect models. The difference in the coefficients must be inconsistent to favour the random effect model, according to the null hypothesis for the Hausman test, or the fixed effect model must be used instead. Results of the Hausman test were shown in Table 4.7.

Table 4.7: Hausman Specification Results

	(b)	(B)	(b-B)	Sqrt (diag(V_b-V_B))
	Fixed	Random	Difference	S.E.
Asset Quality	-0.004	-0.019	-0.015	0.016
Management Efficiency	11.285	13.977	-2.691	0.419
Liquidity Management	0.025	0.064	-0.038	-
chi2(3)	34.48			
Prob>chi2	0.0000			

Source: Study Data (2023)

The results of the Hausman test are shown in Table 4.7, which demonstrates that the null hypothesis is disproved. Given this outcome, it appears that the fixed effect model is preferred over the random effect model. With a 5% (0.05) level of significance, the Hausman test yielded a prob > chi2 value of 0.0000, which is smaller than the p-value. Therefore, it is imperative that the investigation utilize the fixed effect regression model.

4.4 Interpretation of Regression Results on Financial Performance

In the experiment, research hypotheses were evaluated using a multivariate fixed-effect regression model. A panel regression model was fitted by the survey to assess the impact of financial performance factors on the financial performance of Kenyan Development Financial Institutions. Table 4.8 displays the findings from the evaluation of the investigation's hypotheses at a 5% level of significance.

Table 4.8: Regression Results

Financial Performance	Coef.	Std. Err.	T	P>t	[95% Conf. Interval]
Asset Quality	-0.019	0.006	-2.99	0.041	-0.038 -0.001
Management Efficiency	13.977	3.133	4.46	0.011	5.277 22.676
Liquidity Management	0.064	0.019	3.27	0.031	0.009 0.119
_cons	0.162	0.169	0.96	0.394	-0.309 0.633
R ²	0.4979				
F(3,4)	29.75				
Prob>F	0.0034				

Source: Study Data (2023)

In light of the result of the fixed effect model, the significance of the model was evaluated using the F statistical value of 29.75, which has a matching p-value of 0.0034. This demonstrated that the fixed effect model was suitable for assessing how financial performance drivers affected Kenyan Development Financial Institutions' financial performance. The findings demonstrated the model's goodness of fit, which clearly implies that the financial performance of Kenyan Development Financial Institutions was highly influenced by the drivers of financial performance. To substantiate this, the R-square, which represents the variation in financial performance as a consequence of alterations in the explanatory, revealed that the drivers of financial performance account for 49.79% of variations in the financial performance of Kenyan Development Financial Institutions. A positive financial performance value was recorded as the intercept of the regression equation at 0.162.

4.5 Findings of the analysis of the Drivers of Financial Performance.

This section reported the theoretical testing findings, which were consistent with the investigation's specific goals. The underlying presumptions for Hypotheses H₀₁, H₀₂, and H₀₃ were that asset quality, management efficiency, and liquidity management did not significantly affect the financial performance of Kenyan Development Financial Institutions. This follows the stated objectives of the studies paving way as to how each objective was reached. The panel regression approach of analysis at 5% threshold significance was used to investigate the hypotheses. The estimated p-values of the drivers of financial performance were used to test the study's hypotheses against the 5% threshold significance.

4.5.1: Effect of Asset Quality on Financial Performance Development Finance Institutions in Kenya

The study sought to evaluate the effect of asset quality on the financial performance of development finance institutions in Kenya. The Descriptive results on the effect of asset quality on Financial Performance are presented below;

Variable	Obs	Mean	Std. Dev.	Min	Max
Financial Performance	40	3.175	14.935	-9	90
Asset Quality	40	6.579	18.475	0.946	99.408

The asset quality had a minimum and maximum value of -0.946 and 99.408, a mean of 6.579, and a standard deviation of 18.475. The outcomes of the descriptive statistics show that the asset quality of the institutions portrays higher variance when compared with financial performance owing to the fact that different Kenya's Development Financial Institutions have different customers' base which they issued loans thus, determining the recovery of such loans within Kenya.

The regression results on the effect of asset quality on Financial Performance are presented below;

Financial Performance	Coef.	Std. Err.	T	P>t	[95% Conf. Interval]
Asset Quality	-0.019	0.006	-2.99	0.041	-0.038 -0.001

Analysis of the effect of asset quality on the financial performance of Kenyan Development Financial Institutions was the goal of the enquiry. Results demonstrated that the proper null hypothesis was tested at the 0.05 level of significance. Asset quality exhibited a negative coefficient of -0.019 in the robust regression output, which corresponds to a p-value of 0.041 and is statistically significant under the 5 percent threshold. The results indicated that there is a significant inverse effect of asset quality on Kenyan Development Financial Institutions' financial performance in Kenya, with an increase of 1unit in asset quality causing a 0.019unit decline in financial performance.

The results showed that Kenya's Development Financial Institutions' financial performance was significantly ($0.041 < 0.05$) affected by asset quality. According to the output, improving asset quality would have a positive effect on these institutions' financial performance. It was determined that asset quality significantly affects the financial performance of Kenyan Development Financial Institutions, which was the null hypothesis. It follows that asset quality has a big impact on Kenyan Development Financial Institutions' financial performance.

4.5.2: Effect of Management Efficiency on Financial Performance Development Finance Institutions in Kenya

Variable	Obs	Mean	Std. Dev.	Min	Max
Financial Performance	40	3.175	14.935	-9	90
Management Efficiency	40	0.040	0.411	-0.754	0.772

The mean and standard deviation for the efficiency of management were 0.040 and 0.411, respectively. The results showed that for both the lowest and highest values, the mean and standard deviation values are within a range of -0.754 and 0.772, respectively. This shows that the management efficiency of Kenya's Development Financial Institutions changes less than other variables in the study, given the standard deviation value. This implies that the institutions have made efforts in efficiently managing the responsibilities of the institutions in Kenya thus, signifying only little differences in the management efficiency approach

The regression results on the effect of Management efficiency on Financial Performance are presented below

Financial Performance	Coef.	Std. Err.	T	P>t	[95% Conf.	Interval]
Management Efficiency	13.977	3.133	4.46	0.011	5.277	22.676

The second objective of the investigation was to determine how management efficiency affected Kenyan Development Financial Institutions financial performance. To test the null hypothesis with respect to this objective, the 0.05 threshold significance was employed. The hypothesis stated that management efficiency has no significant effect on Kenya's DFIs' financial performance. As a result, management efficiency had a significant ($0.011 < 0.05$) impact on the financial performance of Kenyan Development Financial Institutions. At the 0.05 level of significance, management efficiency showed a positive (13.977) coefficient and a significant (0.041) value effect on the financial performance of Kenyan Development Financial Institutions. When management efficiency improves by 1 unit, financial performance will increase by 13.977 units.

Given these end outputs, the investigation was unable to prove the null hypothesis, according to which management efficiency has no significant effect on the financial performance of Kenyan Development Financial Institutions. As a result, Kenyan Development Financial Institutions' financial performance has been used for predictability resulting from management efficiency.

4.5.3: Effect of Liquidity Management on Financial Performance Development Finance Institutions in Kenya.

Variable	Obs	Mean	Std. Dev.	Min	Max
Financial Performance	40	3.175	14.935	-9	90
Liquidity Management	40	9.414	13.400	0.037	59.588

In addition, a mean of 9.414 with a standard deviation of 13.400 was discovered for liquidity management. The standard deviation demonstrated that the approach to the management of liquidity of these institutions varies to a very substantial degree due to the competitive environment

in which Kenya's Development Financial Institutions operate. The lowest and highest readings were 0.037 and 59.588, respectively.

The regression results on the effect of Liquidity Management on Financial Performance are presented below

Financial Performance	Coef.	Std. Err.	T	P>t	[95% Conf. Interval]
Liquidity Management	0.064	0.019	3.27	0.031	0.009 0.119

The study also explores how liquidity management affects the financial performance of Kenyan Development Financial Institutions. At the 0.05 level of significance, the effectiveness of the null hypothesis was evaluated. Relating to the objective, the null hypothesis stated that liquidity management has no significant effect on DFIs' financial performance in Kenya. The outcomes showed that the liquidity management has a significant (0.031 0.05) effect on the financial performance of Kenyan Development Financial Institutions. The outputs of the survey also showed that liquidity management had a positive (0.064) coefficient and statistically significant (0.031) effect on the financial performance of Kenyan Development Financial Institutions, indicating that financial performance would increase by 0.064unit as liquidity management increases by 1unit. In light of the aforementioned outcomes, the null hypothesis—which asserted that liquidity management has no significant effect on the financial performance of Kenyan Development Financial institutions was rejected. This suggests that liquidity management has a major effect on the financial performance predictability of Kenyan Development Financial Institutions.

CHAPTER FIVE

DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter featured a summary of the findings, relevant discussions, conclusions, policy recommendations, contributions to knowledge and suggestions for additional research. The summary was created using the investigation's goals as a guide. The study's findings served as the foundation for the conclusions and suggestions. More details about the work's contribution to the body of knowledge are provided in this chapter.

5.2 Discussion of Findings

The investigation's main goal was to examine the drivers of financial performance of Kenya's development financial institutions. Particularly, the drivers considered in the survey included asset quality, management efficiency, and liquidity management. According to descriptive analysis, financial performance, asset quality, and liquidity management all had significant standard deviations across observations during the study period, in contrast to management efficiency, which had little dispersion across the data. In view of the objectives of the study, the outcomes are discussed.

5.2.1: The effect of Asset Quality on financial performance

The study aimed to examine the effect of asset quality on Kenyan DFI financial performance. The results strongly supported that DFI performance was negatively significantly impacted by asset quality level. Therefore, decreased asset maintenance would lower DFI profitability in Kenya. Asset quality strongly influenced DFI returns. Poor quality loans can increase provision costs, reducing profits as concluded by Fredrick (2014). Asset quality positively relates to institutional efficiency, indicating DFIs should closely monitor assets using credit risk management. These findings align with Gabriel et al. (2019) who found non-performing loans negatively impacted

Nigerian bank performance significantly. Budiarto (2021) confirmed non-performing loans negatively affect bank performance significantly. Loan portfolio quality directly impacts profitability according to Ongore and Kusa (2013), with non-performing loans to be minimised through strategic policies. A higher loan loss provision to asset ratio can signal poor quality loans/management negatively affecting bank profitability per Rao and Lakew (2012). Ongore and Kusa (2013) identified a strong negative relationship between non-performing loan ratios and Kenyan bank performance, linking poor asset maintenance with subpar returns. Kosmidou (2008) also concluded poor asset quality reduces profitability by lowering interest income and raising provision costs. Thus, maximizing returns requires DFIs maintain or curb credit risk exposure.

5.2.2: The effect of Management Efficiency on financial performance

The study sought to determine the effect of management efficiency on Kenyan DFI financial performance. Results noted management efficiency positively impacted DFI returns. Management efficiency emerged as a significant driver, with higher levels improving DFI financial performance in Kenya. Nasserinia et al. (2014) proposed poor management raises financial institution failure risk. Atemnkeng and Nzongang (2006) argued management drives portfolio diversification and composition extent/desire. Assets and liabilities chosen plus unit costs incurred determine ability to earn high profits per them. Overall, findings showed management quality played a vital role, as more proficient leadership optimized resource utilization and decision making to positively influence institutional returns. Elevating efficiency through targeted interventions thus stood to beneficially influence performance sustainability amongst developmental institutions under investigation.

5.2.3: The effect of Liquidity management on financial performance

The investigation / the study sought to ascertain the effect of liquidity management on the financial performance of Kenyan Development Financial Institutions. The report's executive summary stated that the liquidity management significantly improved the financial performance. The findings suggested that enhancing liquidity management would eventually result in a significant improvement in the financial performance of Kenyan Development Financial Institutions. The result is consistent with Ngumo, Collins and David (2017) who concluded that operational efficiency and microfinance banks financial performance in Kenya were said to have direct

relationship. Ikapel, Namusonge and Sakwa (2019) exposed that management efficiency and commercial banks financial performance has a positive and strong connection.

This agreed with the outcomes of Edem (2017) who revealed that significant relationship between liquidity management and the performance of banks. Manoj, Thomas and Abraham, (2018) indicated that liquidity levels of commercial banks as measured by liquid assets to total assets was a key performance metric. Mugo and Mutsweje (2020) established that liquidity regulation significantly affected the financial performance of the commercial banks in Kenya. At variance with the study outcomes, Akims, Kiio, Tenai and Akims (2021) found that liquidity regulation was not significant in affecting profitability of Microfinance Banks in Kenya. These divergent conclusions from the study's findings indicated a situation in which different study locations were used.

5.3 Conclusion

Using an examination of how Kenya's Development Financial Institutions were affected by financial performance determinants, various findings were drawn regarding the specific goals the survey sought to address. Asset quality has a significant inverse effect on the financial performance of Development Financial Institutions in Kenya, as the analysis shown. According to the investigation's findings, asset quality is a major factor in Kenya's Development Financial Institutions' financial performance. Therefore, asset quality plays a significant role in the financial performance of DFIs' Kenya as it affects the amount of funds available for lending.

The results demonstrated that managerial effectiveness significantly improved the financial performance of Kenyan Development Financial Institutions. The financial success of Kenya's Development Financial Institutions appears to be significantly influenced by management effectiveness. Consequently, effective administration of development financial institutions may enhance financial performance.

The results of the experiment also demonstrated that the performance of Kenya's Development Financial Institutions was significantly affected by the liquidity management. A considerable impact of liquidity management on the financial performance of Kenya's Development Financial Institutions was discovered by the enquiry. As a result, adjustments to the management of liquidity could have an impact on Kenya's financial performance.

5.4 Policy Recommendations

Recommendations were made in relation to the drivers of financial performance used in the enquiry and their effects on the Development Financial Institutions in Kenya. The asset quality had a negatively significant effect on the financial performance of Kenyan Development Financial Institutions, judging by the examination's conclusion. The management of Development Financial Institutions should strengthen the means through which non-performing loans could reduce to boost the financial performance of the institutions. This can be done through critical assessment of customers' credit worthiness to reduce the amount of loans that are non-performing in Kenya.

The survey found that the efficiency of management has a significant and positive effect on Kenyan Development Financial Institutions' financial performance. In relation to this, the management of Development Financial Institutions should improve the efficiency of management to reduce leakages that could emanate from the operations of these institutions. This can be done through the adoption of technological means thus, reducing the cost of financial operations in institutions in Kenya.

As a result of the investigation's findings, Kenya's Development Financial Institutions have experienced a significant and positive effect from liquidity management on their financial performance. As a result, the liquidity management of Development Financial Institutions should be enhanced to boost the financial performance of the institutions in line with the liquidity regulation of the supervisory authority in Kenya. This should be done through seizing the opportunities in the loopholes of the policy to enhance the financial performance of Development Financial Institutions in Kenya.

5.5 Contribution to Knowledge

The study's findings have expanded our knowledge of the relationships between Kenya's Development Financial Institutions and the factors that affect their financial performance. The survey then went on to discuss how the study had influenced the growth of theory, practise, and policy. By expanding on the theoretical foundations of the study's Liquidity Preference Theory and CAMEL Model, the analysis has helped to increase the relevance as it relates to the financial performance of Development Financial Institutions.

By achieving the objectives, the financial performance of the Kenyan Development Financial Institutions Model is significantly influenced by the financial performance drivers, the analysis's findings contribute to knowledge. As a consequence, the body of knowledge now available has been expanded with additional information regarding the empirical relationships between drivers of financial performance and the financial success of development financial institutions.

5.6 Suggestion for Further Research

The study provided proof of an evaluation of the effect of drivers of financial performance of Kenya's development financial institutions. The recommendations for additional investigation are concentrated on the particular study findings. The study found that, contrary to expectations, every factor affecting financial performance had a significant effect on the Development Financial Institutions. Since the study used secondary data for its analysis, a primary survey can be used to look into the factors influencing the financial performance of Kenya's development finance institutions.

Other studies can be conducted to explore other drivers of financial performance aside those used in the investigation. Studies can also be carried to determine the financial performance of other financial institutions such as microfinance and commercial banks in Kenya.

5.7 Limitations of the study

Only secondary data was used which was sourced from the Auditor General's website. Some accounts were incomplete necessitating collection from individual DFIs.

The sample was restricted to 5 government-owned DFIs out of all in Kenya. Further research on all DFIs was suggested for broader insights.

Analysis focused on three CAMEL aspects: liquidity management, asset quality and management efficiency. The study recommended investigations of additional CAMEL factors such as earnings, leverage and capital adequacy for more comprehensive results

In summary, reliance solely on secondary records without primary data collection, confinement of the sample and exclusion of other potentially important CAMEL/performance indicators from the scope limited the depth and generalizability of outcomes. Wider sampling, primary data sources and inclusion of extra dimensions were areas proposed for future studies to expand on the findings.

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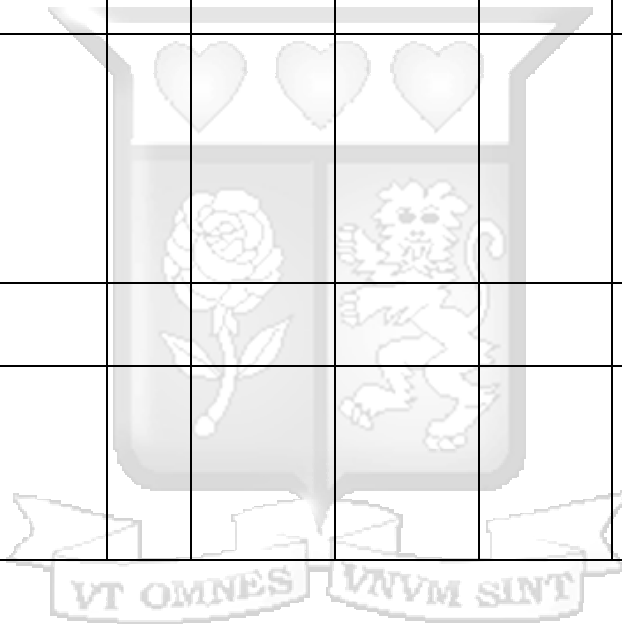
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APPENDICES

Appendix I: Data Collection Sheet

			2012/2013	2013/2014	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020	Mean
RETURN ON ASSETS =											
Net Income after tax /Total Asset											
Net income											
Total Assets											
RETURN ON EQUITY =											
Net Income after tax /Total Equity											
Net income											
Total Equity											
LIQUIDITY MANAGEMENT											
= Current assets/current liabilities											
Current assets											
Current liabilities											

ASSET QUALITY = Non- Performing Loans/ Loan loss provision											
Non-performing Loans											
Loan loss provision											
MANAGEMENT EFFICIENCY = Operating Profit/ Total Income											
Operating Income											
Total Income (Interest and Noninterest)											



Appendix II-List of Kenyan Development Finance Institutions;

	DFI Name	Abbreviation
1.	Tourism Finance Corporation	TFC)
2.	Industrial Commercial and Development Corporation	(ICDC)
3.	IDB capital	(IDB)
4.	Kenya Industrial Estates-	KIE)
5.	Agricultural Finance Corporation –	(AFC)



24th November 2022

Ms Katsenga Ruth,
hakkiekatsenga2@gmail.com

Dear Ms Katsenga,

RE: Analysis of The Drivers of Asset Quality Affecting Financial Performance of Development Financial Institutions (DFIs) in Kenya

This is to inform you that SU-ISERC has reviewed and **approved** your above SU- master's research proposal. Your application reference number is SU-ISERC1518/22. The approval period is from 24th November 2022 to 23rd November 2023.

This approval is subject to compliance with the following requirements:

- i. Only approved documents including (informed consents, study instruments, MTA) will be used
- ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by SU-ISERC.
- iii. Death and life-threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to SU-ISERC within 48 hours of notification
- iv. Any changes, anticipated or otherwise, that may increase the risks or affect safety or welfare of study participants and others or affect the integrity of the research must be reported to SU-ISERC within 48 hours
- v. Clearance for the export of biological specimens must be obtained from relevant institutions.
- vi. Submission of a request for renewal of approval at least 60 days prior to the expiry of the approval period. Attach a comprehensive progress report to support the renewal.
- vii. Submission of an executive summary report within 90 days of completion of the study to SU-ISERC.

Prior to commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology, and Innovation (NACOSTI) <https://research-portal.nacosti.go.ke/> and obtain other clearances needed.

Yours sincerely,



for: **Dr Ben Ngoye,**
Secretary; SU-ISERC

Cc: Prof Fred Were,
Chairperson; SU-ISERC





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